EXHIBIT 3

SAMPLE INTERFERENCE STUDY
FOR
DESIRED/UNDESIRED MDS AND ITFS STATIONS

Figure 1: Provides complete details of proposed and/or modified MDS/ITFS facility on which study is based.

Figure 2: Provides complete details of "Desired" ITFS station to be protected including registered receive site data. The second part of this section provides itemized details of interference study along with resulting D/U ratio figures. ITFS stations requesting 15-mile protection would also include a Figure 3 analysis, see below.

Figure 3: Provides details of protected MDS/ITFS station with 15-mile protected study. Hypothetical receive points analyzed could be fixed or vary from study to study. The Vega Group supports fixed points to maintain the standardization sought by the Commission.

Additional Figure(s): Claims of noninterference due to conditions such as terrain blockage could be illustrated in any additional figures and applicant feels is appropriate such as terrain shadow maps. Alternatively, consent statements could be included as additional figures as well. The burden will be on the applicant to conclusively demonstrate that no interference will occur or that the "Desired" station will accept any detected interference.

Glossary of Terms: Applicants would include the Glossary of Terms which define and clarify fields included in the interference study.

NOTE: The Vega Group:

a.) Opposes studies that extend to 100 miles since 65 miles is more appropriate;

b.) Opposes studies that include points that claim to be "over-the-horizon" or "blocked by terrain" without providing a D/U ratio first;

c.) Supports the industry's joint development of a standardized interference study to be available for all applicants, permittees and/or licensees; and

d.) Opposes the Commission's proposal to complete interference studies on behalf of the industry as this will lead to further processing delays.

TECHNICAL CHARACTERISTICS OF PROPOSED (UNDESIRED) STATION

INDEPENDENT SCHOOL DISTRICT #492

STATION LOCATION:	AUSTIN, MINNESOTA
CALL SIGN:	NEW
FCC FILE NUMBER:	NEW
FREQUENCY:	G1-G4 (+ OFFSET)
NORTH LATITUDE:	43° 40' 33"
WEST LONGITUDE:	93° 00' 09"
TRANSMITTER OUTPUT POWER:	43dBm
TRANSMISSION LINE LOSS:	5.1dB
MAX ANT. GAIN:	14dBi
ANTENNA TYPE:	ANDREW HMD16HO
MAX E.R.P.:	51.9dBm
POLARIZATION:	HORIZONTAL
ORIENTATION OF MAIN LOBE:	OMNIDIRECTIONAL
NUMBER OF ANTENNAS USED:	1
GROUND LEVEL:	1210' AMSL
ANTENNA RADIATION CENTER:	394' AGL

FIGURE 1

ITFS INTERFERENCE STUDY
Page 1 of 2

TECHNICAL CHARACTERISTICS OF DESIRED STATION:

Station: Regents of University of Minnesota
Call Sign: WIG34
Latitude: 44°21'02"
Ant Type/Polarization: Andrew P8F-25D Horizontal
Ant Azimuth: 146°
GL (ft. AMSL): 1250 ft.
Rad Center (ft. AGL): 395 ft.

City: Hader
File #: BMLIF-880105DA
Longitude: 92°46'53"

State: Minnesota
Freq: G1-G4
TX Power (dBm): 30
Max Ant Gain: 33.9 dBi
Line Loss: 3.8
Max E.R.P. (dBm): 60.1 dBm

Site #	Site Name LAT/LON	Distance to DS	Bear to DS	DS E.R.P.	DS FSPL	RX Max Gain	DS Signal Level (dBm)
RT25	Mayo Foundation* 44°01'12" 92°28'06"	27.6	325.7°	60.1	-133.3 FCC Std.	33.9 20.0	39.3 53.2
RT26	University of Minnesota 44°00'23" 92°27'45"	28.6	326.5	60.1	-133.7 FCC Std.	33.5 20.0	40.1 53.6
RT27	IBM Corporation 44°03'29" 92°30'42"	24.2	326.6	60.1	-133.2 FCC Std.	31.4 20.0	40.7 52.1

*Coordinates listed for this site in the application are incorrect.

FIGURE 2
PAGE 1 OF 2

UNDESIRED STATION PARAMETERS AND RESULTS:

Distance from DS to UNS: 47.9 miles (76.9 km)
Bearing from DS to UNS: 193.3°
Desired Polarization: Horizontal
Undesired Polarization: Horizontal
Required D/U Ratio: 45 dB Co-Channel/28 dB with offset

Site #	UNS E.R.P.	UNS Dist to RX	Bear to RX	UNS FSPL	REC Angle	RX Ant Gain	UNS Signal Level (dBm)	D/U Sum
RT25	51.9	35.7	48.3	-135.6	97.4	+0.9	82.8	43.5
					FCC Std.	+2.0	81.7	28.5
RT26	51.9	35.3	49.8	-135.5	96.7	+1.5	82.1	42.0
					FCC Std.	+2.0	81.6	28.0
RT27	51.9	36.0	42.9	-135.7	103.7	+1.4	82.4	41.7
					FCC Std.	+1.0	82.8	30.7

FIGURE 2
PAGE 2 OF 2

(027.11)

TECHNICAL CHARACTERISTICS OF DESIRED STATION

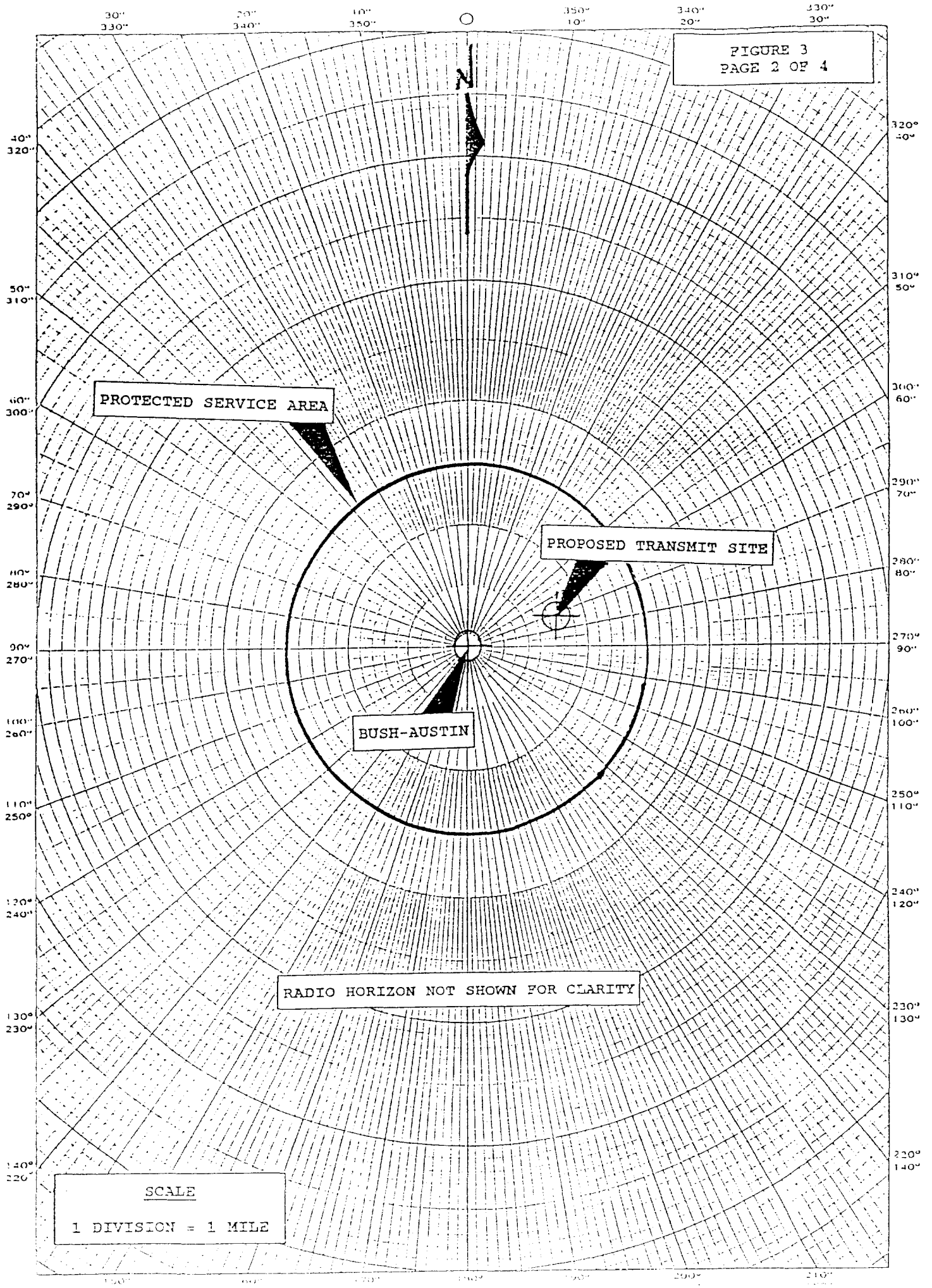
WALTER L. BUSH, JR.*

STATION LOCATION:	AUSTIN, MINNESOTA
CALL SIGN:	WMH332
FCC FILE NUMBER:	50715-CM-P-93
FREQUENCY:	F1-F4
NORTH LATITUDE:	43° 38' 18"
WEST LONGITUDE:	93° 08' 49"
TRANSMITTER OUTPUT POWER:	43dBm
TRANSMISSION LINE LOSS:	4dB
MAXIMUM ANTENNA GAIN:	13dBi
ANTENNA TYPE:	ANDREW HMD12VO
MAXIMUM E.R.P.:	52dBm
POLARIZATION:	VERTICAL
ORIENTATION OF MAIN LOBE:	OMNI
NUMBER OF ANTENNAS USED:	1
GROUND LEVEL:	1300' AMSL
ANTENNA RADIATION CENTER:	350' AGL

FIGURE 3

*License under modification

(030.11)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N
PROTECTED SERVICE AREA
PROPOSED TRANSMIT SITE
BUSH-AUSTIN
RADIO HORIZON NOT SHOWN FOR CLARITY
SCALE
1 DIVISION = 1 MILE

PROTECTED SERVICE AREA INTERFERENCE STUDY

*DESIRED STATION: Walter L. Bush, Jr.--Austin, Minnesota
*RADIO HORIZON: 35.8 miles • Distance to Desired: 7.7 miles • Bearing to Desired: 250.3°
*REQUIRED CO-CHANNEL D/U RATIO: 45dB
*REQUIRED CO-CHANNEL D/U RATIO WITH OFFSET: 28dB
*REQUIRED ADJACENT-CHANNEL D/U RATIO: 0dB
*FCC STANDARD REFERENCE RECEIVE ANTENNA USED

DESIRED STATION DATA						UNDESIRED STATION DATA							
AZIMUTH FROM DESIRED	DISTANCE FROM DESIRED	DESIRED FSPL	DESIRED REC ANT GAIN	ERP	SIGNAL LEVEL	ANGLE TO REC FROM UNDESIRED	DISTANCE TO REC	UNDESIRED FSPL	REC ANGLE	REC GAIN	UNDES ERP	SIGNAL LEVEL	D/U RATIO
0	15	-128.1	20	52	56.1	329.9	14.5	-127.7	30.1	-16	51.9	91.8	35.7
30	15	-128.1	20	52	56.1	1.5	10.3	-124.8	28.5	-16	51.9	88.9	32.8
60	15	-128.1	20	52	56.1	49.7	7.6	-122.2	10.3	-5	51.9	75.3	19.2
90	15	-128.1	20	52	56.1	108.5	8.2	-122.8	18.5	-13	51.9	83.9	27.8
120	15	-128.1	20	52	56.1	150.3	11.6	-125.8	30.3	-16	51.9	89.9	33.8
150	15	-128.1	20	52	56.1	179.1	15.6	-128.4	29.1	-16	51.9	92.5	36.4
180	15	-128.1	20	52	56.1	202.4	19.0	-130.1	22.4	-16	51.9	94.2	38.1
210	15	-128.1	20	52	56.1	223.5	21.4	-131.2	13.5	-7	51.9	86.3	30.2
240	15	-128.1	20	52	56.1	243.6	22.6	-131.8	3.6	0	51.9	79.7	23.6
270	15	-128.1	20	52	56.1	263.5	22.4	-131.6	6.5	-1	51.9	80.7	24.6
300	15	-128.1	20	52	56.1	283.8	20.8	-130.9	16.2	-13	51.9	92.0	35.9
330	15	-128.1	20	52	56.1	305.3	18.0	-129.6	24.7	-16	51.9	93.7	37.6
0	10	-124.5	20	52	52.5	315.8	10.4	-124.9	44.8	-16	51.9	89.0	36.5
30	10	-124.5	20	52	52.5	340.0	6.4	-120.7	50.0	-16	51.9	84.8	32.3
60	10	-124.5	20	52	52.5	31.0	2.8	-113.5	29.0	-16	51.9	77.6	25.1
90	10	-124.5	20	52	52.5	133.2	3.8	-116.2	43.2	-16	51.9	80.3	27.8
120	10	-124.5	20	52	52.5	169.3	7.7	-122.3	49.3	-16	51.9	86.4	33.9
150	10	-124.5	20	52	52.5	191.3	11.5	-125.7	41.3	-16	51.9	89.8	37.3
180	10	-124.5	20	52	52.5	209.3	14.5	-127.8	29.3	-16	51.9	91.9	39.4
210	10	-124.5	20	52	52.5	227.5	16.6	-128.9	17.5	-14	51.9	91.0	38.5
240	10	-124.5	20	52	52.5	244.5	17.6	-129.5	4.5	-1	51.9	78.6	26.1
270	10	-124.5	20	52	52.5	261.5	17.4	-129.4	8.5	-5	51.9	82.5	30.0
300	10	-124.5	20	52	52.5	278.7	16.1	-128.7	21.3	-16	51.9	92.8	40.3
330	10	-124.5	20	52	52.5	296.5	13.6	-127.2	33.5	-16	51.9	91.3	38.8

PROTECTED SERVICE AREA INTERFERENCE STUDY

*DESIRED STATION: Walter L. Bush, Jr.--Austin, Minnesota
*RADIO HORIZON: 35.8 miles • Distance to Desired: 7.7 miles • Bearing to Desired: 250.3°
*REQUIRED CO-CHANNEL D/U RATIO: 45dB
*REQUIRED CO-CHANNEL D/U RATIO WITH OFFSET: 28dB
*REQUIRED ADJACENT-CHANNEL D/U RATIO: 0dB
*FCC STANDARD REFERENCE RECEIVE ANTENNA USED

DESIRED STATION DATA

AZIMUTH FROM DESIRED	DISTANCE FROM DESIRED	DESIRED FSPL	DESIRED REC ANT GAIN	ERP	SIGNAL LEVEL
0	5	-118.5	20	52	46.5
30	5	-118.5	20	52	46.5
60	5	-118.5	20	52	46.5
90	5	-118.5	20	52	46.5
120	5	-118.5	20	52	46.5
150	5	-118.5	20	52	46.5
180	5	-118.5	20	52	46.5
210	5	-118.5	20	52	46.5
240	5	-118.5	20	52	46.5
270	5	-118.5	20	52	46.5
300	5	-118.5	20	52	46.5
330	5	-118.5	20	52	46.5

UNDESIRED STATION DATA

ANGLE TO REC FROM UNDESIRED	DISTANCE TO REC	UNDESIRED FSPL	REC ANGLE	REC GAIN	UNDES ERP	SIGNAL LEVEL	D/U RATIO
288.6	7.6	-122.2	71.4	-16	51.9	86.3	39.8
290.3	5.0	-118.5	99.7	-16	51.9	82.6	36.1
268.1	2.8	-113.5	151.9	-25	51.9	86.6	40.1
220.6	3.4	-115.2	130.6	-23	51.9	86.3	39.8
209.6	5.8	-119.8	89.6	-16	51.9	83.9	37.4
214.3	8.3	-122.9	64.3	-16	51.9	87.0	40.5
223.6	10.5	-124.9	43.6	-16	51.9	89.0	42.5
234.6	11.9	-126.1	24.6	-16	51.9	90.2	43.7
246.3	12.6	-126.6	6.3	-1	51.9	75.7	29.2
258.1	12.5	-126.5	11.9	-5	51.9	79.6	33.1
269.6	11.5	-125.7	30.4	-16	51.9	89.8	43.3
280.3	9.8	-124.4	19.7	-16	51.9	88.5	42.0

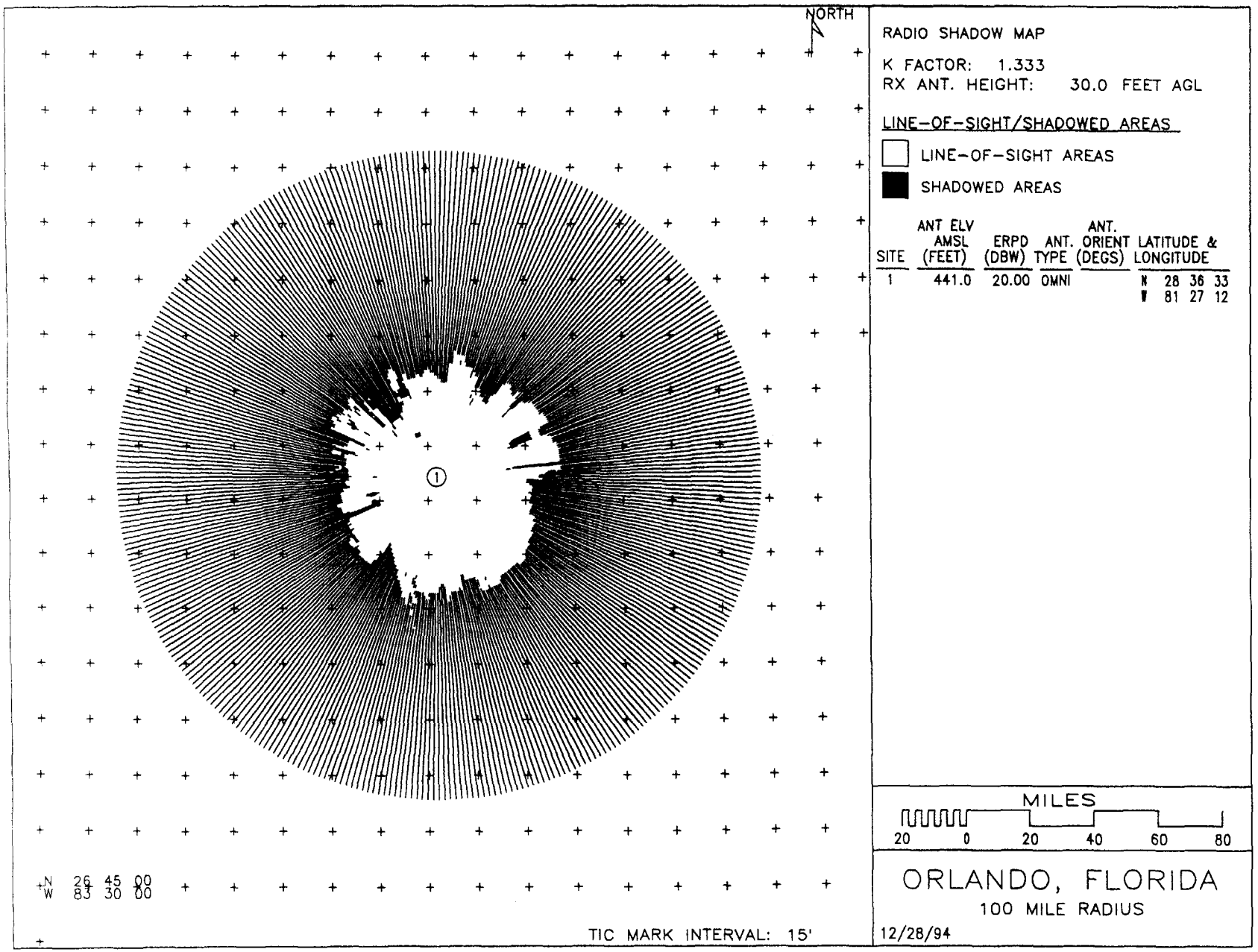

FIGURE ___*___

***ADDITIONAL DATA (Sample Only)**

GLOSSARY OF TERMS

TECHNICAL CHARACTERISTICS OF PROPOSED (UNDESIRED) STATION:

STATION LOCATION:	City and State location of transmitter site.
CALL SIGN:	FCC issued call sign. Blank if a new station.
FCC FILE NUMBER:	FCC issued file number. Blank if new station with no known assigned number.
FREQUENCY:	Actual channel number or subgroup.
NORTH LATITUDE:	Transmitter geographic latitude.
WEST LONGITUDE:	Transmitter geographic longitude.
TRANSMITTER OUTPUT POWER:	Output power in dBm before any losses.
TRANSMISSION LINE LOSS:	All insertion losses in dB.
MAX ANT. GAIN:	Maximum gain of transmitting antenna in dBi.
ANTENNA TYPE:	Manufacturer and model of transmitting and antenna.
MAX ERP:	Maximum Effective Radiated Power in dBm.
POLARIZATION:	Polarization of antenna.
ORIENTATION OF MAIN LOBE:	Azimuth of the main radiation lobe in degrees; "OMNI" if Omnidirectional antenna used.
NUMBER OF ANTENNAS USED:	Total number of transmit ground elevation antennas in use.
GROUND LEVEL:	Ground Elevation Above Mean Sea Level of transmitter site in feet.
ANTENNA RADIATION CENTER:	Height of antenna radiation centerline Above Ground Level in feet.

TECHNICAL CHARACTERISTICS OF DESIRED STATION:

STATION:	Applicant, Permittee or Licensee name as it appears on FCC application.
CITY/STATE:	City and State location of transmitter site.
CALL SIGN:	FCC issued call sign. Blank if a new station.
FCC FILE NUMBER:	FCC issued file number. Blank if a new station with no known assigned number.
FREQUENCY:	Actual channel number or subgroup.
LATITUDE:	Transmitter geographic latitude.
LONGITUDE:	Transmitter geographic longitude.
TX. POWER(dBm):	Output power in dBm before any losses.
ANTENNA TYPE/POLARIZATION:	Manufacturer and model of transmitting antenna and corresponding polarization.
MAX ANT. GAIN:	Maximum gain of transmitting antenna in dBi.
ANT AZIMUTH:	Azimuth of the main radiation lobe in degrees; "OMNI" if Omnidirectional antenna used.

LINE LOSS:	All insertion losses in dB.
GL (ft. AMSL):	Ground Elevation Above Mean Sea Level of transmitter site location in feet.
RAD CENTER (ft. AGL):	Height of antenna radiation centerline Above Ground Level in feet.
MAX ERP(dBm):	Maximum Effective Radiated Power measured in dBm, unless otherwise noted.

INTERFERENCE ANALYSIS PARAMETERS:

SITE #:	Numeric listing of receiver site locations as specified in the ITFS application analyzed.
NAME; LAT/LON:	Specific receiver site name and corresponding latitude and longitude as extracted from appropriate application.
DISTANCE TO DS:	Distance in miles to Desired Station transmitting site.
BEAR TO DS:	Bearing in degrees to Desired Station transmitting site.
DS ERP:	Desired Stations Effective Radiated Power as calculated for the appropriate angle of reception.
DS FSPL:	Free Space Path Loss calculated based on distance between desired station transmitting site and analyzed receiver site.
RX. MAX GAIN:	Receive antenna gain oriented with main lobe directed towards desired station transmitting site.
DS SIGNAL LEVEL(dBm):	Calculated signal input level at receive site for desired station.

UNDESIRED STATION PARAMETERS AND RESULTS

SITE #:	Corresponding site number as referenced in beginning interference analysis. Receiver site information extracted from application.
UNS ERP:	Undesired Station Effective Radiated Power calculated for particular angle.
UNS DIST TO RX.:	Distance in mileage between Undesired Station and receiver site.
BEAR TO RX.:	Bearing in degrees to protected receive site.
UNS FSPL:	Free Spaced Path Loss calculated between Undesired Station and receiver site analyzed.
REC. ANGLE:	The discrimination angle calculated for Undesired Station.
RX. ANT. GAIN:	Receiver antenna gain in direction of Undesired Station.
UNS SIGNAL LEVEL(dBm):	Calculated signal level of Undesired Station at receiver site analyzed.
D/U SUM:	Calculated Desired to Undesired ratio for specific receiver site analyzed.

(ITFS_Attach1A)

ATTACHMENT 1
MDS STUDY
GLOSSARY OF TERMS

TECHNICAL CHARACTERISTICS OF PROPOSED (UNDESIRED) STATION:

STATION LOCATION:	City and State location of transmitter site.
CALL SIGN:	FCC issued call sign. Blank if a new station.
FCC FILE NUMBER:	FCC issued file number. Blank if new station with no known assigned number.
FREQUENCY:	Actual channel number or subgroup.
NORTH LATITUDE:	Transmitter geographic latitude.
WEST LONGITUDE:	Transmitter geographic longitude.
TRANSMITTER OUTPUT POWER:	Output power in dBm before any losses.
TRANSMISSION LINE LOSS:	All insertion losses in dB.
MAX ANT. GAIN:	Maximum gain of transmitting antenna in dBi.
ANTENNA TYPE:	Manufacturer and model of transmitting and antenna.
MAX ERP:	Maximum Effective Radiated Power in dBm.
POLARIZATION:	Polarization of antenna.
ORIENTATION OF MAIN LOBE:	Azimuth of the main radiation lobe in degrees; "OMNI" if Omnidirectional antenna used.
NUMBER OF ANTENNAS USED:	Total number of transmit ground elevation antennas in use.
GROUND LEVEL:	Ground Elevation Above Mean Sea Level of transmitter site in feet.
ANTENNA RADIATION CENTER:	Height of antenna radiation centerline Above Ground Level in feet.

TECHNICAL CHARACTERISTICS OF DESIRED STATION:

STATION:	Applicant, Permittee or Licensee name as it appears on FCC application.
CITY/STATE:	City and State location of transmitter site.
CALL SIGN:	FCC issued call sign. Blank if a new station.
FCC FILE NUMBER:	FCC issued file number. Blank if a new station with no known assigned number.
FREQUENCY:	Actual channel number or subgroup.
LATITUDE:	Transmitter geographic latitude.
LONGITUDE:	Transmitter geographic longitude.
TX. POWER(dBm):	Output power in dBm before any losses.
ANTENNA TYPE/POLARIZATION:	Manufacturer and model of transmitting antenna and corresponding polarization.
MAX ANT. GAIN:	Maximum gain of transmitting antenna in dBi.

ANT AZIMUTH:	Azimuth of the main radiation lobe in degrees; "OMNI" if Omnidirectional antenna used.
LINE LOSS:	All insertion losses in dB.
GL (ft. AMSL):	Ground Elevation Above Mean Sea Level of transmitter site location in feet.
RAD CENTER (ft. AGL):	Height of antenna radiation centerline Above Ground Level in feet.
MAX ERP(dBm):	Maximum Effective Radiated Power measured in dBm, unless otherwise noted.

INTERFERENCE ANALYSIS PARAMETERS:

DESIRED STATION:	Company name and location of desired station analyzed.
RADIO HORIZON:	Radio horizon for undesired station in miles including 30' receiver height.
DISTANCE TO DESIRED:	Distance in miles to desired station transmitting site from undesired station transmitting site.
BEARING TO DESIRED:	Bearing in degrees to desired station transmitting site.

DESIRED TO UNDESIRED STATION FIGURES AND RESULTS:

AZIMUTH FROM DESIRED:	Bearing in degrees from desired station transmitting site to protected receive site location.
DISTANCE FROM DESIRED:	Distance in miles from desired station transmitting site to receiver location analyzed.
DESIRED FSPL:	Free space path loss calculated based on distance between desired station transmitting site and analyzed receive site.
DESIRED RECEIVE ANTENNA GAIN:	Receive antenna gain oriented with main lobe directed towards desired station transmitting site for maximum reception. Typically FCC standard antenna utilized except where indicated.
E.R.P. (dBm):	Desired station effective radiated power in pertinent direction.
SIGNAL LEVEL (dBm):	Signal level of desired station signal at receiver site analyzed.
ANGLE TO RECEIVE FROM UNDESIRED:	Bearing in degrees from undesired transmitting site to protected receive site location.
DISTANCE TO RECEIVER:	Distance in miles to desired station protected receive site location.
UNDESIRED FSPL:	Free space path loss calculated for distance between undesired station and receive site analyzed.
RECEIVE ANGLE:	The discrimination angle calculated for undesired station and main lobe of receive site analyzed.
RECEIVE GAIN:	Receiver antenna gain in direction of undesired station in dB.
UNDES E.R.P.:	Undesired station effective radiated power calculated for pertinent angle.
SIGNAL LEVEL (dBm):	Calculated signal level of undesired station at receiver site analyzed.
D/U RATIO:	Calculated desired to undesired ratio for receiver site analyzed.

(MDS Attach1)